

WHAT IS CLAIMED IS:

1. A method of improving function and structure of the vascular system of a human host, said method comprising:
administering orally to said host in accordance with a predetermined regimen a prophylactic dose of a source of at least one of L-arginine and L-lysine as other than a natural food source to enhance the level of endogenous NO in the vascular system to improve vascular function.
2. A method according to Claim 1, wherein said dose comprises at least 50% by weight of at least one of amino acid compounds L-arginine or L-lysine, polypeptides comprising at least about 40 mol% of at least one of said amino acids, or physiologically acceptable salt thereof.
3. A method according to Claim 2, wherein said polypeptide is an oligopeptide of at least one of L-arginine and L-lysine.
4. A method according to Claim 2, wherein said dose comprises L-arginine.
- 20 5. A method according to Claim 4, wherein L-arginine is administered in a daily amount in the range of 1 to 25g per day.
6. A method according to Claim 4, wherein L-arginine is administered at a dosage in the range of 0.5 to 5g per dose.
- 25 7. A method according to Claim 2, wherein said dose comprises L-lysine.
8. A method according to Claim 7, wherein L-lysine is administered in a daily amount in the range of 1 to 25g per day.
- 30 9. A method according to Claim 7, wherein L-lysine is administered at a dosage in the range of 0.5 to 5g per dose.

10. A method according to Claim 1, wherein said dose comprises at least one of calcium, an amino acid absorption enhancing compound, a cofactor for NO synthase activity, or an antioxidant in an amount sufficient to enhance the prophylactic effect of said L-arginine and L-lysine.

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11. A method according to any of Claims 5, 6, 8 or 9, wherein said dose is administered as a tablet, capsule, or powder.

12. A method according to Claims 5, 6, 8 or 9, wherein said dosage is
10 administered as a prepared solid food, nutritional supplement or liquid.

13. A method of preventing a reduction in vascular function of the vascular system of a human host as evidenced by reduced vasodilation, said method comprising:

15 administering orally to said human host in accordance with a predetermined regimen a prophylactic dosage of at least one of L-arginine, L-lysine or physiologically acceptable salt thereof as other than a natural food source in a daily amount to provide a plasma level in the range of 0.15 to 3 mM to enhance the level of endogenous NO in the vascular system,
20 whereby reduction in said vasodilation is inhibited.

14. A method according to Claim 14, wherein said L-arginine, L-lysine or a physiologically acceptable salt thereof is present in a prepared food, nutritional supplement or liquid at from about 0.5 - 25 g.

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15. A method according to Claim 13, wherein said dose of L-arginine, L-lysine or a physiologically acceptable salt thereof, is in the range of 0.5 - 10g in combination with at least one of calcium, folate, B₁₂ or B₆ in sufficient amount to enhance the effect of said L-arginine, L-lysine or a physiologically acceptable salt
30 thereof.

16. A method according to Claim 13, wherein said L-arginine, L-lysine or its physiologically acceptable salt is administered as a tablet, capsule, or powder.

5 17. A physiologically acceptable formulation comprising at least one of L-arginine, L-lysine or its physiologically acceptable salt in from about 0.5 to 5g and at least one of calcium, folate, B₆, or B₁₂, in sufficient amount to enhance the effect of said L-arginine, L-lysine or its physiologically acceptable salt on enhancing the amount of NO in a human host.

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18. A physiologically acceptable formulation comprising L-arginine or its physiologically acceptable salt.

19. A physiologically acceptable formulation comprising L-lysine or its
15 physiologically acceptable salt.

20. A method for inhibiting vascular smooth muscle cell proliferation at a site of injury in the vascular system, said method comprising:
administering at said site an effective amount of at least one of L-arginine,
20 L-lysine or its physiologically acceptable salt to enhance NO production;
whereby vascular smooth muscle cell proliferation is inhibited.

21. A method according to Claim 20, wherein said injury is as a result of angioplasty.